

## REMARKS/ARGUMENTS

Claims 9, 10 and 16 and the specification on page 3 have been amended to correct the errors pointed out in the first paragraph on page 2 of the Office Action.

Claims 19 and 20 stand rejected under §112, first paragraph, in that, with respect to Claim 19, the expression "each relative to a determination based on pore radii of 0 to 100 nm" is deemed to be new matter and that, as to Claim 20, a % was not inserted between "5 and w/w". Claim 20 has been amended to insert the %. Clearly, the insertion of the % is not new matter, as can be seen from, e.g., page 3, lines 32 *et seq.*

With respect to Claim 19, it is respectfully submitted that the phrase "each relative to a determination based on pore radii of 0 to 100 nm" does not introduce new matter. To begin with, note that the pore volume whenever referred to in the specification is defined by the additional information "(0 to 100 nm)". In this regard, see page 6, line 36, page 7, line 20, page 8, lines 4 and 25, Table I, etc. The "0 to 100 nm" refers to the radius of the pores of the boehmitic alumina. In the tables, the radius in Angstroms is compiled against the pore volume in  $\text{cm}^2/\text{g}$  (cc/g). As the Examiner doubtless knows, a pore volume always refers to the total of all pores of a particular range of sizes. In the present case, macro-porous pores do not contribute to the pore volume. Accordingly, it is respectfully submitted that the phrase in question does not introduce new matter as all the examples in the specification make clear that the pore size is measured by determining the pore size of all pores having pore radii in the range from 0 to 100 nm. In this regard, it should be pointed out that Claim 19 has been further amended to recite that the range is "from greater than 0 to 100 nm". This overcomes the rejection under §112, second paragraph, as to how the radii could ever be 0 nm.

Turning to the art rejections, Claims 9, 11-15, and 17-19 stand rejected as obvious over *Bauer* '139. The rejection is respectfully traversed. *Bauer* neither teaches the amount of seed material claimed by applicant nor the crystallite size of the seed material. Claims 19 calls for the amount of seed material to be between 0.1 to 5% w/w and for the crystal nuclei to have an average diameter of 20 to 150 nm. These ranges are far outside of those taught or suggested by *Bauer*. In Column 2, line 17 *et seq* of *Bauer*, it is taught that the boehmite seeding agent should be finer than 200 Angstroms (less than 20 nm) and that a relatively large amount of such seeds, at least 7.5% by wt. is required. The cited lines of *Bauer* teach away from applicants' invention. The amount of seed material needed by *Bauer*, at least 7.5% by wt. is far greater than 5% wt. w/w of seed used by applicant. Furthermore, applicants' claimed crystallite size of 20 to 150 nm can hardly be considered as overlapping with *Bauer* who teaches that the crystallite size of the seed material should be finer than 20 nm.

The Examiner has pointed to Example III of *Bauer* as showing the use of 1% by wt. of seed material having a particle size of below 0.05 microns. In the first place, particle size is not the same as crystallite size. A seed material having a particle size of 50 nm consists of agglomerates of many crystals having a crystallite size of finer than 20 nm, a necessary feature of the *Bauer* invention as taught in Column 2, lines 17 *et seq*. Accordingly, the 1% by wt. of particles referred to in Example III of *Bauer* does not translate to 1% of seed crystallites having an average diameter of 20 to 150 nm. The *Bauer* reference neither discloses nor suggests applicant's invention as set forth in Claim 9. Accordingly, it is respectfully submitted that Claims 9, 11-15, and 17-19 are patentable over *Bauer* '139.

Claims 10-19 stand rejected as unpatentable over *Magee* '526 or *Magee* '494. This rejection

is also respectfully traversed. As noted by the Examiner, the references are essentially the same, primarily differing in the use of polyethylene in *Magee* '526 and cellulose in *Magee* '494.

Turning first to *Magee* '526, there is no teaching in that patent that the polyethylene, regardless of particle size, forms a latex. While it is true, that in Column 1, lines 63-65, it is stated that a polyethylene emulsion can be used, there is no indication that the emulsion would, in fact, be a latex. While it is known that substituted polyethylenes, such as chlorosulfonated polyethylene will form latexes, this is because the polyethylene has a surfactant group, i.e., a chlorosulfonic acid group. The same is not true of polyethylene, which has no surfactant groups, much less any polar groups, which would aid its solubility in water. Indeed, polyethylene is completely insoluble in water. Hence, its ability to form latexes is, at best, questionable. Since Claim 10 specifically calls for the polymer to be of a type that forms a latex, it is respectfully submitted that Claims 10-19 are patentable over *Magee* '526.

With respect to *Magee* '494, that reference teaches that the cellulose is to be added in an amount of 15 to 70% of polymer based on the amount of alumina, whereas Claim 10 calls for a maximum amount of 5% wt./wt. of polymer. Clearly, Claim 10 and claims dependent thereon are distinguishable over *Magee* '494. Furthermore, as in the case of *Magee* '526, there is no teaching in *Magee* '494 of the use of a latex as specifically called for by Claim 10.

The Examiner's attention is called to the fact that in the Encyclopedia Britannica 2003, a latex is defined as a colloidal suspension. Neither of the *Magee* references discusses a colloidal suspension. While, as noted, *Magee* '526 speaks to an emulsion, an emulsion is not necessarily a colloidal suspension. It is respectfully submitted that Claims 10-19 are patentable over *Magee* '494 or '526.

With respect to newly added Claim 21, that claim is specifically directed to a Markush grouping of organic polymers that form the latexes and none of those polymers are disclosed or suggested by either of the *Magee* references. Clearly, newly added Claims 21 and 22 are patentable over both of the *Magee* references.

The Examiner has treated all the claims as if they were product-by-process claims when, in fact, they are method claims except for Claim 20. That being the case, any reliance on *In re Best* 195 US PQ 430 is misplaced. If applicants claimed method is different from the prior art methods, then the claims are patentable absent a *prima facie* showing that they are not. In this case, such a *prima facie* showing is absent.

In view of the foregoing amendments and remarks, it is respectfully submitted that all remaining claims are in condition for allowance, which is hereby earnestly solicited and respectfully requested.

Respectfully submitted,



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I, Sheri Cooper, hereby certify that this correspondence and all referenced enclosures are being deposited by me with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 9, 2004.

By: 